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Patent of Mr. Frederick Bartholomew Folsch, of Oxford street, for improvements on instruments, and pens to facilitate writing.

Dated May, 1809.

Mr. Folsch's instrument for writing, is a fountain pen improved chiefly by the addition of a valve at the top; by pressing down which a small quantity of air is admitted on the enclosed ink, so as to let it descend as required.

The ink is contained in a tube about the usual dimensions, closed at top by a short tube, containing the valve which screws down into it. The valve is formed by a button covered with leather, which closes an aperture at the bottom of the short tube, and from which a shank rises upwards to a little sliding piece at the top, that is pressed upwards, so as to keep the valve closed, by a spiral spring, coiled round the shank, one end of which presses against the bottom of the short tube, and the other end against the little sliding piece; by pressing down which the valve is opened, and the air admitted; and on withdrawing the pressure, the re-action of the spring shuts the valve again.

The pen part of this instrument, differs from other metallic pens, in having a flat piece soldered on in front, all the way down to the commencement of the nib, whence it proceeds downwards detached to within a very small distance of the point, a hole is made in its upper part to admit air. Its use is to contain a greater quantity of ink close to the nib, and to prevent its flowing too freely from it. From the bottom of the large tube, a very small one (about the thirtieth of an inch in diameter) proceeds downwards about half way to the point.

This lower, or pen part, is made so as to be separated from the rest occasionally to clean it.

In some of Mr. Folsch's pens, instead of the valve, the top of the large tube is closed by a screw, in which a small hole is drilled upwards, to meet another horizontal one in the side a little way down. The air is admitted through these apertures, by turning round the screw backwards a little way.

The other variations in Mr. Folsch's writing instruments consist principally in different arrangements of the pen part, which are too minute to admit of description without drawings.

Remarks.... These pens seem very superior in their construction to common fountain pens, and would be found very serviceable to those who were much pressed in time when writing. It is not, however, likely that the metallic pens, which terminate them, will be found equally pleasant to write with as pens made of quills; the peculiar elasticity of which no art has yet been able to imitate effectually in metal.

On the use of violet pickle as a re-agent; and on the utility of salting vegetables intended for distillation, by M. Descroizilles, sen.

Annales de Chimie.

The re-agent most usually employed for determining the presence of acids, uncombined alkalis, and alkaline carbonats, is syrop of violets. This re-agent, is, however, subject to several inconveniences. If it be exposed to a rather warm temperature, it ferments; the cork of the bottle flies out; a part of the syrop runs over, and the rest after being reddened more or less by the carbonic acid that is formed, dries up into a mass of small crystals. It very frequently happens that flies and other insects, being attracted towards it, are drowned in it, putrify, and alter the syrop. It was therefore conceived that a pickle of violets might be substituted for it, and it answered upon trial. The following is the mode of preparing it.

Pour upon the petals of violets, which have been slightly squeezed into a very small pewter measure, double their weight of boiling water, cover the vessel, and expose it for some hours to a heat rather superior to that of baths, and then pass the water through a very clean cloth squeezing it strongly. Afterwards weigh the infusion very exactly, and add to it the third part of its weight of common salt. The finest white salt is to be preferred, because it contains little or no muriate with an earthy base, which might effect the colour. This pickle is of a fine deep

violet blue, and being kept in a corked bottle, it may be kept without any alteration, although it is exposed to different temperatures, and even to the rays of the sun: as a re-agent it is preferable to the best syrup of violets, 100 parts of the syrup contain 66 of sugar, which frequently contains lime; in 100 parts of the pickle there are only 25 of salt. There is some reason to suppose that several other blue flowers, such as those of flag, larkspur, &c. would also yield a pickle of sufficient accuracy: the latter indeed has been tried with complete success.

In order to use this blue pickle, the end of a small splinter, or a broken match is dipped in it, and then applied to a plate. By repeating this manœuvre the middle of a plate will hold thirty spots for trial, each of which does not consume a quarter of a drop, so that a few decigramms of this pickle will serve to make numerous experiments in the course of the year.

2d Part....It appears that in general the usefulness of applying common salt to preserve those vegetables, which are brought from a distance, for the use of apothecaries or perfumers, has not been sufficiently appreciated. Hilaire Marin Rouelle, under whom the author was educated, perfumed his laboratory, during the whole of a course of chemistry in the winter of 1775, by distilling the roses he had salted in the preceding June. The rose water that he obtained from them formed, by the addition of a little sugar and alcohol, a very pleasant liquor. A vessel filled with salted roses has been kept for the last three years in the author's laboratory, the perfume of these roses has not lost any of its agreeableness or of its strength. The salting was performed in the following manner.

Take a chiliogramme and a half (3 lb.) of roses, rub them for two or three minutes with half a chiliogramme (1 lb.) of salt. The flowers being bruised by the friction of the grains of the salt, yield their juice, so that there is immediately formed a kind of paste that is not very bulky; and this is to be put by in an earthen jar, or in a barrel, until it is filled,

by repeating the same process, by which means all the roses will be equally salted in a proper manner. The vessel is then to be shut up and kept in a cool place, until it is wanted.

When it is desired, at any leisure time, to begin the distillation, this aromatic paste is to be put into the body of the still along with twice its weight of water. By this means there is no occasion to be hurried by the season, nor to pay any attention to the distance, as a person at Paris may distil during the winter, the aromatic vegetables, which were salted, a long time before in the provinces most distant from the capital.

According to some observers the distilled waters obtained in this way are much more agreeable, than the common, and nevertheless they yield more essential oil. It may however be affirmed, that these saltings may be applied to some very useful purposes; for example, if it be true that the distilled waters of some plants cannot be preserved from one year to another, notwithstanding they were prepared with every possible attention, it is equally certain, that these plants being well salted, need only be distilled when wanted, and may thus be used while all their medical virtues are in perfection.

INVENTIONS BY MR. R. TREVITHICK, RELATIVE TO NAUTICAL AFFAIRS.

1st. *Account of a wrought Iron moveable Caisson, with a Rudder, for docking a ship, while riding at her moorings, without removing stores or masts.*

This floating dock is made of wrought iron, half an inch thick, 210 feet long, 54 feet wide, and 30 feet deep, and will weigh about 400 tons; with a flanch six feet wide at the top, for the workmen to stand on, and to strengthen the caisson.

The weight of this caisson, when immersed in water, is nearly 350 tons; but for reasons, mentioned below, it is rendered nearly buoyant by an air receptacle, which surrounds it, and is capable of sustaining the whole weight with great exactness, and which is riveted to the caisson, in such a manner as to strengthen it, and support the principal props from the ship.